

ABSTRACT

Described is a lithium ion battery 10 comprising:

A housing having a front side 13 and a backside 15 and an anode cell terminal 5 60 and a cathode cell 44 terminal separated therefrom;

Positioned within the housing a plurality of bipolar lithium ion cells 40 having an lithium ion permeable plastic separator 32 there between; the cell electrodes being comprised of a thin film plastic substrate 34 and being electrically connected appropriately to the anode and the cathode cell terminals;

10 wherein the cells are longitudinally placed in the housing parallel to the sides of
the housing; and

wherein the housing is enclosed by the cathode cell terminal at one end and the anode cell terminal at the opposite end of the cell sleeve; and

the enclosed housing is capable of receiving an electrolyte placed between the cells and the electrolyte is capable of carrying ions between the anode and the cathode

Also described is a method of manufacturing the lithium ion batteries.